



2014 Research Excellence Framework

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Research in higher education institutions is publicly funded through what is known as the dual support system; under this system money for specific research projects comes from the Research Councils and funding for research infrastructure comes from the regional funding councils in the form of a block grant. Since 1986 block grant funding has been selectively distributed to institutions using data obtained in some form of research assessment process. The most recent design of the process is the Research Excellence Framework (REF). The REF took several years to develop and the first submissions were made in January 2013. The results of the REF 2014 were announced in December 2014 and consequent funding allocations will be disclosed in March 2015.

This note discusses the development of the REF, the results announced in December 2014 and issues around the REF and research funding.

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1 Background

University research is publicly funded through what is known as the dual support system, under this system money for specific research projects comes from the various Research Councils and funding for research infrastructure comes from the four regional Higher Education Funding Councils (the Higher Education Funding Council for England, HEFCE; the Higher Education Funding Council for Wales, HEFCW; the Scottish Higher Education Funding Council, SHEFC; Department for Employment and Learning Northern, DELNI).

Since 1986 the Funding Councils have distributed their share of research funding using data obtained in a research assessment process. The first such review in 1986 was called the Research Assessment Exercise (RAE). The RAE was a peer review process conducted every three to five years which aimed to provide comprehensive and definitive information on the quality of UK research in each subject area. The results of the RAE were then used to allocate funding to institutions based on the scores obtained in the review.

Following the 2001 RAE concerns were expressed about the assessment process and a consultation was carried out on the future of the system. In December 2006 it was announced in the pre-budget report that a new process for assessing research would be introduced and the Higher Education Funding Councils were asked to develop this new system. The last assessment under the old process was carried out in 2008.

Library briefing [Future of the Research Assessment Exercise](#), 3 May 2006,¹ gives a history of the research assessment process and an outline of the 2008 RAE.

1.1 Development of the Research Excellence Framework

Following the 2008 RAE it was suggested that a new system of expert review should be developed and that this new system should be based on a greater use of quantitative data or 'metrics'. The new system would be called the Research Excellence Framework (REF) and was to be developed over a lengthy period with extensive consultation and piloting of new processes.

In November 2007 HEFCE launched a consultation on the new REF.² The consultation document proposed creating a metrics-driven approach for science-based disciplines and the use of light-touch expert review for the arts, humanities and social sciences. This initial consultation looked at several areas including: the use of different approaches for science-based disciplines and for the other disciplines, the role of expert panels, and the range and use of quantitative indicators. Responses³ to the consultation were analysed and as a result changes were made and it was decided that a unified framework for all disciplines would be developed - the timetable for designing the new framework was extended by 12 months.

In 2008/9 HEFCE ran a pilot exercise to test the use of bibliometric indicators of research quality.⁴

Following the bibliometrics pilot, in September 2009, the UK funding bodies issued a second consultation on the REF,⁵ the consultation document summarised developments and stated that the key features of the REF would be:

¹ SN/SP/4013 [Future of the Research Assessment Exercise](#), 3 May 2006

² HEFCE 2007/34 [Consultation on the assessment and funding of higher education research post-2008](#)

³ HEFCE Circular letter 13/2008 [Research Excellence Framework: outcomes of consultation and next steps](#)

⁴ Information available at 2014 REF [Bibliometrics pilot exercise](#)

- **Output quality:** An assessment of a selection of the submitted unit's highest quality research outputs. This is to identify the extent to which staff in the submitted unit have produced excellent research during the assessment period. This is discussed further at paragraphs 28-50.
- **Impact:** An assessment of demonstrable economic and social impacts that have been achieved through activity within the submitted unit that builds on excellent research. This is to assess the extent to which a submitted unit has built upon its strong record of excellent research to make a positive impact on the economy and society within the assessment period. This is discussed further at paragraphs 51-76.
- **Environment:** An assessment of the quality and sustainability of the submitted unit's research environment, its contribution to the vitality of the research base, and its wider engagement beyond the institution and discipline.

The outcomes of the consultation were published in March 2010.

One key area of concern which was raised by academics was including impact as a criterion for research assessment, so during 2010 the REF team ran a pilot exercise to test and develop proposals for assessing the impact of research. Information on the pilot is available on the REF 2014 website at [Impact pilot exercise](#). Decisions on the broad framework for the assessment of impact were finally announced in March 2011⁶ and eventually after a long gestation the submission system for the new REF process was opened in January 2013.

1.2 Why the REF matters

The REF is a hugely important matter for HEIs and the public funding of research. The results of the REF are used by the Funding Councils to allocate around £2bn of funding. A good outcome in the REF can increase universities' basic research funding and raise their reputation. An institution with 'world leading' research can potentially further boost its income by attracting increasing numbers of students and in particular higher numbers of lucrative overseas students.

Conversely a poor result in the assessment can see institutional funding reduced and in some cases this can lead to departmental restructuring or closures.

2 2014 Research Excellence Framework

An overview of the new process for assessing research is given on the [REF 2014](#) website:

The REF will be undertaken by the four UK higher education funding bodies. The exercise will be managed by the REF team based at HEFCE and overseen by the REF Steering Group, consisting of representatives of the four funding bodies.

The primary purpose of the REF is to produce assessment outcomes for each submission made by institutions:

- The funding bodies intend to use the assessment outcomes to inform the selective allocation of their research funding to HEIs, with effect from 2015-16.
- The assessment provides accountability for public investment in research and produces evidence of the benefits of this investment.

⁵ HEFCE 2009/38 Research Excellence Framework Second consultation on the assessment and funding of research

⁶ REF 2014 website [Decisions on assessing research impact](#) March 2011

- The assessment outcomes provide benchmarking information and establish reputational yardsticks.

The REF is a process of expert review. HEIs will be invited to make submissions in 36 units of assessment. Submissions will be assessed by an expert sub-panel for each unit of assessment, working under the guidance of four main panels. Sub-panels will apply a set of generic assessment criteria and level definitions, to produce an overall quality profile for each submission.

2.1 Details of the 2014 REF process

Submissions

Each HEI was permitted to make submissions in 36 units of assessment (UOA) - a UOA refers to a particular academic subject, clinical medicine, mathematical sciences, history etc. An expert sub-panel for each UOA was selected to assess submissions working under the leadership and guidance of four main panels. The submission system opened in January 2013 and the deadline for submissions was 29 November 2013.

Detailed guidance for HEIs on submissions was published in a document, [Assessment framework and guidance on submissions](#)⁷ the document explained what should be included in a submission:

Each submission will contain, in summary:

- a. **REF1a/b/c**: Information on staff in post on the census date, 31 October 2013, selected by the institution to be included in the submission.
- b. **REF2**: Details of publications and other forms of assessable output which they have produced during the publication period (1 January 2008 to 31 December 2013). Up to four outputs must be listed against each member of staff included in the submission.
- c. **REF3a/b**: A completed template describing the submitted unit's approach during the assessment period (1 January 2008 to 31 July 2013) to enabling impact from its research, and case studies describing specific examples of impacts achieved during the assessment period, underpinned by excellent research in the period 1 January 1993 to 31 December 2013.
- d. **REF4a/b/c**: Data about research doctoral degrees awarded and research income related to the period 1 August 2008 to 31 July 2013.
- e. **REF5**: A completed template describing the research environment, related to the period 1 January 2008 to 31 July 2013.⁸

Institutions were permitted to make one submission in each UOA, more than one submission was only permitted in exceptional circumstances and with prior permission from the REF manager.

Each HEI decided which individuals to select for submission in accordance with its own internal code of practice and staff selected for submission were listed in two categories, A or C – category A staff are employed by and HEI and category C staff are employed by any other type of organisation.

⁷ REF 02.2011 [Assessment framework and guidance on submissions](#) July 2011

⁸ *Ibid* p5

Assessment

The assessment of submissions was carried out by expert sub-panels for each of the 36 UOAs based on three criteria: the quality of research outputs, the vitality of the research environment and the wider impact of research. Information on these criterion was set out in the guidance document on p6:

Assessment criteria

25. As with previous RAEs, the assessment process is based on expert review. Each sub-panel will examine the submissions made in its UOA, taking into account all the evidence presented. They will use their professional judgement to form an overall view about each submission. In doing do, the sub-panels will assess three distinct elements of each submission, against the following generic criteria:

a. **Outputs:** The sub-panels will assess the quality of submitted research outputs in terms of their 'originality, significance and rigour', with reference to international research quality standards. This element will carry a weighting of 65 per cent in the overall outcome awarded to each submission.

b. **Impact:** The sub-panels will assess the 'reach and significance' of impacts on the economy, society and/or culture that were underpinned by excellent research conducted in the submitted unit, as well as the submitted unit's approach to enabling impact from its research. This element will carry a weighting of 20 per cent.

c. **Environment:** The sub-panels will assess the research environment in terms of its 'vitality and sustainability', including its contribution to the vitality and sustainability of the wider discipline or research base. This element will carry a weighting of 15 per cent.

Assessment outcomes

During the assessment process the submissions were graded using a scale of one to four star levels, or unclassified. Following the assessment process the sub-panels awarded an overall quality profile for each submission, the overall quality profile shows the proportion of research activity in a submission judged to meet each starred level. The definitions of the starred levels is given below:

Overall quality profile: Definitions of starred levels

Four star: Quality that is world-leading in terms of originality, significance and rigour.

Three star: Quality that is internationally excellent in terms of originality, significance and rigour but which falls short of the highest standards of excellence.

Two star: Quality that is recognised internationally in terms of originality, significance and rigour.

One star: Quality that is recognised nationally in terms of originality, significance and rigour.

Unclassified: Quality that falls below the standard of nationally recognised work. Or work which does not meet the published definition of research for the purposes of this assessment.

2.2 Data on submissions

154 UK universities took part in the REF. A total of 191,232 research outputs were submitted for assessment, this included submissions from 52,077 Category A full-time equivalent (FTE) staff.

3 Results of the 2014 REF

The results of the process were announced on 18 December 2014; the results by UOA and by institution are on the REF 2014 website at [Results and submissions](#) and in the REF document *Research Excellence Framework 2014: The results*.⁹

The REF report gave the following overview of the results:

Overall quality was judged, on average across all submissions, to be:

30% world-leading (4*)

46% internationally excellent (3*)

20% internationally recognised (2*)

3% nationally recognised (1*)¹⁰

The report contained the following comment on the results:

The results show that the quality of submitted research outputs has improved significantly since the 2008 RAE. This is consistent with independent evidence about the international performance of the UK research base.

The results also demonstrate that research in all UOAs has led to a wide range of outstanding and very considerable social, economic and cultural impacts.¹¹

The distribution of research quality across institutions was analysed:

Distribution of excellence

24. The 2014 REF has found research excellence in many diverse institutions across the UK. Through the assessment of each element (outputs, impact and environment) differential levels of excellence have been found across institutions. In terms of the overall quality profiles achieved by the 154 submitting institutions:

- Three-quarters of the institutions had at least 49 per cent of their submitted activity graded as internationally excellent (3*) or above.
- One-quarter had at least 79 per cent of their submitted activity graded as internationally excellent (3*) or above.
- Three-quarters had at least 10 per cent of their submitted activity graded as world-leading (4*).
- One-quarter had at least 30 per cent of their submitted activity graded as world-leading (4*).

⁹ REF 01.2014 December 2014 REF Research Excellence Framework 2014: The results

¹⁰ REF 01.2014 December 2014 REF Research Excellence Framework 2014: The results Executive Summary

¹¹ *Ibid* p3

3.1 Results by subject

The results showed that subjects that fell under panel B - sciences and engineering, received the highest proportion of 3* and 4* research, at 83 percent. Panel A results - health subjects, were a close second, with 81 percent of research being ranked at 3* and 4*. Panel A subjects received the most 4*s.

3.2 Results by institution

The *Times Higher Education (THE)* on 18 December 2014 published articles¹² on the results of the REF containing tables of rankings and analyses of institutional performance, one article gave the following institutional rankings:

King's College London is arguably the biggest winner in the 2014 research excellence framework.

The institution has risen 15 places on grade point average, from joint 22nd in 2008's research assessment exercise to seventh in 2014's REF.

Cardiff University, which was also joint 22nd in 2008, has risen one position higher than King's, to sixth, and comfortably achieved its strategic aim of ranking in the top 10.

However, Cardiff drastically reduced the number of people it submitted, from 1,030 full-time equivalents in 2008 to 738 this time. This means that the institution has actually fallen, to 18th position from 15th in 2008, when judged on research power, which is calculated by multiplying an institution's GPA by the number of staff it submitted.

Some observers prefer the research power measure to GPA as the basis for rankings because it gives a better sense of which institutions are likely to win the most quality-related research funding – which is also calculated on the basis of the quality and volume of an institution's submission.

In contrast to Cardiff, King's improved its GPA while submitting more people: 1,369, compared with 1,172 in 2008. This means that its ranking on research power has risen from 11th to sixth, and its market share of total UK research power (which reflects its share of the annual £1.6 billion QR pot) has grown from 2.37 per cent to 2.85 per cent (see full figures on market share).

High risers

By GPA, Cardiff Metropolitan University recorded the largest rise, leaping 62 places, from 103rd to 41st. However, it submitted only 35 staff, compared with 102 in 2008, when it was known as the University of Wales Institute, Cardiff.

Other notable risers on GPA include Queen Margaret University (up from 129th to joint 80th) and the University of the Highlands and Islands (from joint 96th to joint 63rd). Among research-intensive institutions, Swansea University made the biggest leap, from joint 52nd position to joint 26th.

As for reversals, Soas, University of London suffered the greatest, dropping from joint 31st in 2008 to 61st. Another notable faller was the University of Essex, which slid 24 places to joint 35th on GPA.

¹² ["REF 2014 results: table of excellence"](#) and ["REF 2014 winners: who performed best?"](#), *THE* 18 December 2014

The largest percentage point rise in market share of total UK research power was recorded by University College London, where it went from 3.83 per cent to 5.33 per cent. This reflects a large increase in its submitted headcount, from 1,793 to 2,566, after its absorption since 2008 of the School of Pharmacy and, just this month, the Institute of Education. It is now the largest institution by submission volume, followed by the University of Oxford and the University of Cambridge, but it is only joint 18th on its output GPA and joint eighth on overall GPA.

Northumbria University expanded its research power market share, from 0.26 per cent to 0.6 per cent, after more than doubling its submission volume. It is also the biggest riser when ranked by research power, climbing from 80th to 50th.

The University of Manchester was a notable institution to take a hit on research power. Its market share shrank from 3.87 per cent to 3.18 per cent with a submission of 263 fewer staff. Its ranking by GPA also dropped, from eighth to 17th.

London Metropolitan University fell the most on ranking by research power, down 32 places to 103rd.¹³

Articles have also suggested that London universities are now challenging the longstanding dominance of Oxford and Cambridge Universities.¹⁴ Further information on the REF results is available on the *THE* website at [REF 2014](#).

4 Funding allocations

On 20 February HEFCE issued a circular letter¹⁵ announcing funding for universities and setting out the parameters to be used for allocating funding based on the results of the 2014 REF. The principles remain similar to previous allocations and HEFCE will 'continue to selectively to fund world-leading and internationally excellent research wherever it is found'. However the increased number of assessments rated 4* and 3* has resulted in a change to the weighing between 4* and 3* research and the adjustments made after the 2008 RAE to protect funding for research in STEM subjects will be dropped. An article in the *THE* outlined the mechanisms for the funding allocation process:

The letter from the board says that the allocation of funding will follow the percentage weightings of the individual components of the overall quality profile, with outputs accounting for 65 per cent, impact for 20 per cent and environment for 15 per cent.

This effectively adds a cap on the amount of funding distributed on the basis of impact, for example, where scores were particularly high.

The weighting given to 4* research in the funding formula is to be increased. The relative quality weighting between 3* and 4* work will change from 3:1 to 4:1.

David Sweeney, director for research, education and knowledge exchange at Hefce, said the amount of 4* activity increased by 70 per cent in the exercise and that the board thought more money should be allocated to 4* research to recognise this.

"However, if we had allocated significantly more to 4* it would not have left very much to 3* so we took a middle ground," he told Times Higher Education.

¹³ "REF 2014 winners: who performed best?" *THE* 18 December 2015

¹⁴ "REF 2014: Is London now dominant?", *THE* 18 December 2015

¹⁵ HEFCE 03/2015 [Funding for universities and colleges for 2013-14 to 2015-16: Board decisions](#), 20 February 2015

This involves topping up the amount for 4* but still leaving “a pretty decent amount” for 3* research, he added.

He added that the move will “clearly benefit” institutions that had a high amount of 4* activity.

Adjustments put in place to protect STEM research after the RAE, which saw research volume in these areas drop, will not be continued.

After the RAE, Hefce diverted some money away from the arts, humanities and social sciences to boost funding for STEM subjects.

As STEM activity in the REF has now increased to levels seen prior to the RAE, this is no longer required, Hefce believes. Subsequently arts, humanities and social science subjects could see a boost in funding from the REF compared with the RAE.

But the letter says that removing the protection from STEM subjects will affect institutions differently. “To mitigate the institutional impact of this change, for 2015-16 only we will provide a transitional allocation of £28 million (not included in the recurrent research total of £1,558 million) to ensure no institution experiences a reduction in funding directly because of this change,” the letter adds.

The mechanism to determine the slice of the overall QR pie that each discipline receives will remain unchanged from the RAE. Money will be distributed between the four main panels on the basis of cost-weighted volume associated with 3* and 4* research.

This will then be distributed between the units of assessment within each main panel based on quality-weighted and cost-weighted volume.¹⁶

An article in the *THE* discussing the implications of the changes said that new system would lead to further concentration of research funding;

Professor Sayer said that downgrading the importance of 3* research will intensify staff selection, an area that caused “major divisiveness and controversy” in REF 2014.

The move will further concentrate research funding among the top universities in a similar way that axeing funding for 2* research in 2012-13 did, he added. “The REF continues to be an extremely expensive exercise through which academic elites maintain and legitimise their position,” he said.

But Rama Thirunamachandran, vice-chancellor of Canterbury Christ Church University and a former director for research, innovation and skills at Hefce, said that concentration levels “will be about the same as they are now”.

“They won’t increase because the change in the ratio is largely going to reflect that there has been a significant increase in 4* and 3* quality research,” he said.

[...]

David Sweeney, director for research, education and knowledge exchange at Hefce, allayed fears that the increase in volume of 4* research in the medical and life sciences could divert funding from other subjects.

He added that these subjects would see only a “very small increase” in funding because the total volume of 3* and 4* research, on the basis of which funding is split

¹⁶ [“Research funding formula tweaked after REF 2014 results”](#), *THE* 20 February 2015

between the REF's main panels, was "not significantly higher" in the life sciences than in the physical sciences, while the removal of the explicit protections for science and engineering subjects introduced in the RAE would benefit the humanities and social sciences.¹⁷

Funding allocations will be announced in March 2015.

5 Evaluation of REF 2014

HEFCE are now conducting a review of the 2014 REF which will be based on sector feedback and will include an evaluation of impact and a review of the cost of the process. Further information on the review is available on the HECFE website at [Evaluation of the Research Excellence Framework \(REF\)](#).

6 Areas of debate

6.1 Cost of the process

The cost of the 2014 REF has been estimated at £60 million and some commentators have said that the whole process is not worth the costs in time and money:

Around 1,100 of the UK's top scientists and scholars have spent the last year grading 191,232 research outputs submitted to REF 2014. They will have had little time to do anything else. This is just the tip of an iceberg. Universities have commandeered countless more hours of academics' time in preparing their REF submissions. As the demands of successive research assessment exercises (RAEs) have grown, so have the internal bureaucracies devoted to gaming the system.

REF upped the ante further by requiring all submissions to include "impact case studies" as well as outputs. The official bill for this six-yearly academic Battle Royale is around £47m spent within universities and a further £12m in Hefce's administrative costs – most of it taxpayers' money. But the far more significant opportunity cost is that this is all time that could have been spent in the lecture theatre, the library, or the lab, doing what the public thinks it pays us to do.¹⁸

Other academics have suggested that the cost of the REF could be much higher than the official estimates:

Based on conversations with colleagues across the sector, Professor Bowman has produced a "guesstimate" of the real cost of the 2014 research excellence framework that puts it at nearly £1.2 billion. The biggest contributory cost (nearly £600 million) is for preparing the 1,911 submissions, which he says is typically led by a professor.

Other costs are for selecting and validating the 191,000 research outputs submitted by 52,000 staff (£300 million); central management of submissions (£200 million); and researching and writing the 7,000 impact case studies (£100 million). The costs of the time of academics appointed to assessment panels is excluded from the calculation.

Professor Bowman uses full economic costing for salaries because, he thinks, this reflects the cost of the research that might otherwise have been carried out in the time available. He admitted that his estimate was "at the upper end" of the likely costs, but he defied observers to make realistic changes to his assumptions that brought it below £500 million.

¹⁷ "Reform of research funding formula will benefit elites, says REF critic", *THE* 26 February 2015

¹⁸ "Five reasons why the REF is not fit for purpose", *The Guardian*, 15 December 2014

Patrick Dunleavy, professor of political science and public policy at the London School of Economics and an advocate of a metrics-driven REF, said that a £500 million estimate "does not sound unreasonable".

"[The funding councils] will say they took appropriate measures to limit compliance costs, and they are not to blame if universities over-invested in 'winning the REF lottery'. But this is disingenuous. A concerned and sensible policymaker would measure compliance costs actually incurred by regulatees."

Graeme Rosenberg, REF manager for the funding bodies' REF team, described the PA Consulting report as "robust", and said that a similar report had been commissioned to examine the cost of the REF. "Estimates based on one person's or institution's experience are unlikely to reflect the considerable variation in costs between HEIs," he added.

David Price, vice-provost for research at University College London and chair of the earth systems and environmental sciences subpanel in the REF, estimated that UCL had spent 50 "person years" on its submission, costing about £4 million (excluding full economic costing).

He estimated the total cost to the sector to have been £80 million - or up to £120 million once the costs of academics serving on assessment panels were taken into account. But he noted that more than £7 billion over six years would be distributed in England alone on the basis of the REF.

Based on his higher estimate of £120 million, "the total cost of the exercise is 1.7 per cent of the total [distributed]", said Professor Price. "This a very efficient ratio - much more so than that achieved by the [research council] processes."

6.2 Use of impact as a criterion

The UK is the first country to allocate research funding based in part on the wider societal impact of research. A definition of impact for the REF is given in Annex C of the REF guidance document, [Assessment framework and guidance on submissions](#) :

Definition of impact for the REF

4. For the purposes of the REF, impact is defined as an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia (as set out in paragraph 7).

5. Impact **includes**, but is not limited to, an effect on, change or benefit to:

- the activity, attitude, awareness, behaviour, capacity, opportunity, performance, policy, practice, process or understanding
- of an audience, beneficiary, community, constituency, organisation or individuals
- in any geographic location whether locally, regionally, nationally or internationally.

6. Impact **includes** the reduction or prevention of harm, risk, cost or other negative effects.

7. For the purposes of the impact element of the REF:

- a. Impacts on research or the advancement of academic knowledge within the higher education sector (whether in the UK or internationally) are **excluded**. (The submitted unit's contribution to academic research and knowledge is assessed within the 'outputs' and 'environment' elements of REF.)
- b. Impacts on students, teaching or other activities within the submitting HEI are **excluded**.
- c. Other impacts within the higher education sector, including on teaching or students, are **included** where they extend significantly beyond the submitting HEI.

Concerns have been expressed about the use of impact as a criterion - an article in the *Guardian* said that these results were the least objective and the "most vulnerable to manipulation":

"Ref assesses simulations of impact"

During the Ref, the indicators for "impact" - which are new to the 2014 assessment - are the least objectively grounded and most vulnerable to manipulation. This is because of the intrinsic difficulty of measuring the changes to society, economy and policy induced by new knowledge.

The crafted "impact-related" data that is collected during the Ref assessment process also presents challenges. A sophisticated industry has already emerged, manufacturing examples of the relevant "evidence" of impact. Ref assesses simulations of impact, rather than actual impact.

At best, this gets everyone thinking about real connectivity with the users of research, which is one (though only one) of the starting points when producing the impact documentation. At worst, it leads to data that bear as much relation to reality as the statement of output by Russian factories in response to Soviet-era targets.

Inevitably, the universities most experienced and adept at managing their response to performance measures will perform especially well in producing impact documentation. There is also a "halo" effect, of the kind that affects all measures contaminated by prior reputation. Research at, say, Imperial is seen to have impact precisely because it is research from Imperial.¹⁹

Also it should be recognised that some subject areas such as life sciences – which includes clinical medicine - find it easier to show the impact of their research than others. The arts and humanities generally scored lower on impact.

However commentators have said that the inclusion of impact did not have the 'revolutionary' effect on results that some had predicted. Some observers had thought that impact would lead to some post-1992 institutions breaking into the upper echelons of the research rankings.

Australia is also trailing using impact in its research assessment framework.²⁰

6.3 Interpretation of results

The amount of data generated by the REF allows results to be analysed in many different ways and opens up numerous interpretations of the results. Institutions may have rated

¹⁹ "UK research is getting better all the time - or is it?"; *The Guardian*, 23 December 2014

²⁰ "Measuring impact: how Australia and the UK are tackling research assessment", *The Guardian*, 7 December 2014

highly on output, or impact, or grade point average in any unit of assessment or across departments. Articles have commented that the huge number of permutations for analysing results has led to a confusingly large number of institutions claiming to be top in one area or another – this has led to a situation where analysts have said that everyone can claim to be a winner.

6.4 Selectivity of admissions and ‘game playing’

As with previous research assessments there have been suggestions of ‘game-playing’ by some institutions. This was raised in an article in the *Guardian*:

..universities can readily game the assessment of output quality, by being highly selective about whose work they include in the assessment. Including only the best researchers pushes up the average GPA and the proportion of research ranked as four-star. Those institutions that do this pay a financial price, in that their apparent volume of research is reduced – and their subsequent funding will fall. Nevertheless, it is good for reputation. That has many long-term spin-offs, including financial benefits.

While some universities have chosen to approach the REF on an inclusive basis, others have pursued highly tailored entries designed to maximise average output quality and impact. Just one example: Cardiff sharply reduced its number of full-time equivalent staff, from 1,030 in the 2008 RAE to only 738 in the 2014 REF, according to analysis by Times Higher Education. This lifted Cardiff’s quality rating, the grade-point average of its outputs, to sixth in the country, though in terms of the volume of high-quality research it appeared to fall from 15th in the UK to 18th in the Times Higher Education’s ranking.

As universities do not have to enter all the eligible staff for the REF, the data is an incomplete census of all research activity and does not compare like-with-like. In each field of research, the measures of performance compare universities that enter 80%-100% of their staff in that field, with universities that enter only 10 percent-20 percent of the eligible staff, rendering meaningless any comparison of average quality. This undermines the validity of the REF as a league table of system performance, though everyone treats it that way.

Impact of exclusion from REF on researchers’ careers

It has been suggested that excluding academics from inclusion in the REF could tarnish academics careers’:

Patrick Dunleavy, professor of political science and public policy at the London School of Economics, said it was “very disturbing” that universities appeared to have been “gaming the system” by not submitting individuals whose outputs otherwise merited submission. Universities typically insist that non-submission to the REF will not, in itself, have negative career consequences. But many academics remain sceptical of such claims: “Individual careers may well have been sacrificed for institutional convenience,” Professor Dunleavy said.²¹

Following the 2008 RAE equality measures were implemented in the 2014 REF to make the process more inclusive; the measures included requiring all HEIs to have a code of practice setting out fair and transparent procedures for selecting staff to be included in their REF and allowing submissions from staff with fewer than four research outputs where individual staff circumstances had effected the individual’s ability to produce research.

²¹ “Careers at risk after case studies ‘game playing’, REF study suggests”, *THE* 22 January 2015

A report [*Equality and diversity in the 2014 Research Excellence Framework A report by the Equality and Diversity*](#), January 2015, found that the new measures included in the REF supported the inclusion of a wider pool of individuals who might have been excluded previously.